3 R's

What Goes Around...

Subjects:
Science 2.1, 2.4, 2.10, 4.2
Social Studies 4.2, 9.4, 10.1
Math 3.3
Communication skills 2.2, 4.2

Time:
thirty minutes

Setting:
classroom or outside

Materials:
rolled up newspaper, game instructions, role labels with strings/yarn

Skills:
sequence, analyze, observe, explain, role play, follow directions, draw conclusions

Vocabulary:
conserve
cycle
environment
recycle
plant (as in recycling plant)

Source:
Watauga County Recycling Curriculum Committee

Summary: Students will play the "Dead-End vs. Cycle Game" and discuss the impact recycling has on the environment.

Objective: Students will be able to explain how recycling helps conserve natural resources.

Background: As recycling becomes more prevalent, some jobs on the dead-end route will be lost; but new jobs will open up along the recycling route.

Leading Question: What is a cycle and how can it help us save natural resources?
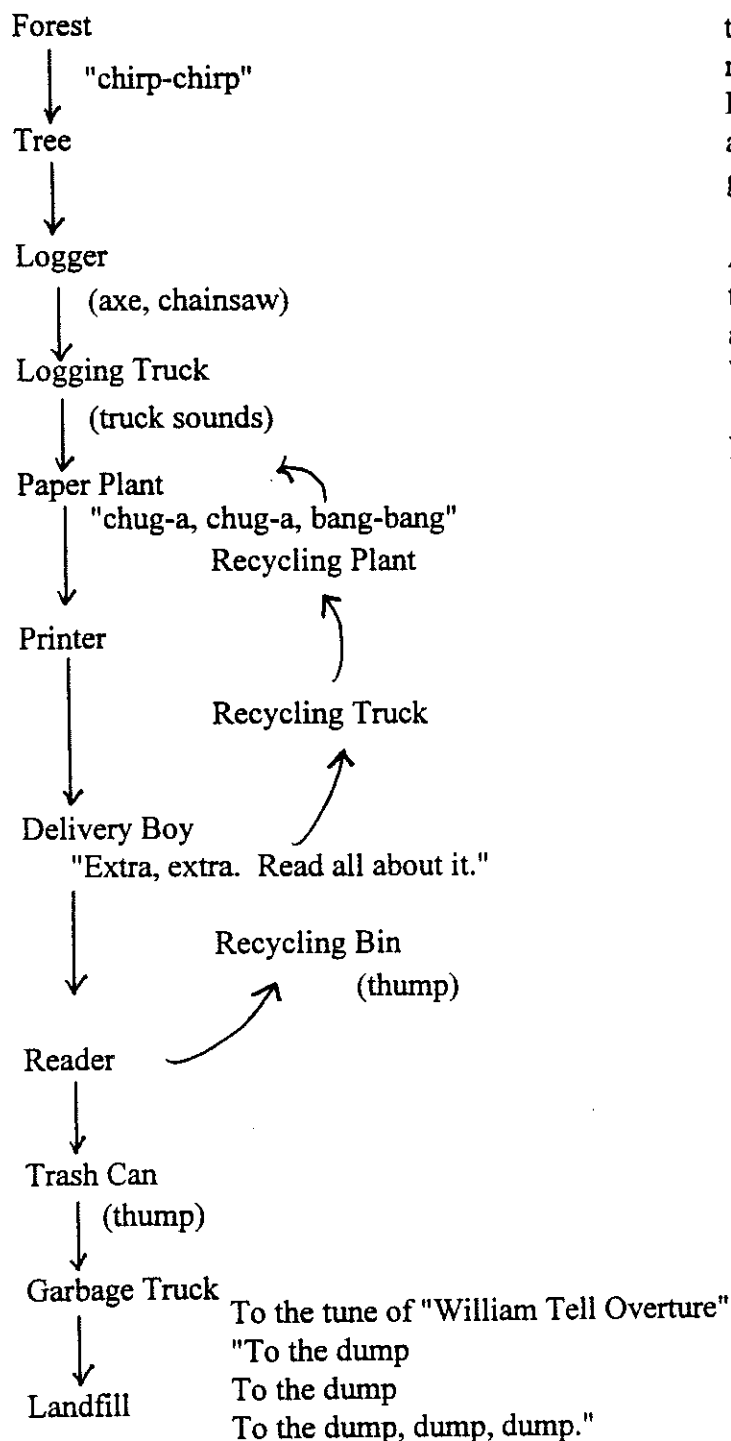
Procedure:

1. Introduce the "Dead-End vs. Cycle Game" by telling the class they are going to act out the life of a newspaper to see how it can affect their community's solid waste stream and natural resources.

2. Distribute role labels to all students. (Using the strings, they hang them around their necks.) Place them in a straight line from Forest to Landfill discussing possible actions each could do when the paper is passed to them (the logger saws, the logging truck is driven, etc.). (Sound effects could be used. Suggestions are in quotation marks.)

3. Play the game, then discuss its implications. Broaden their thinking by asking if newspaper is the only product this game works with.

4. Ask various individuals to explain what this game tells us about taking care of our natural resources. Listen to explanations to check for comprehension.

What Now?

1. Have students illustrate a "dead-end" and "cycle" for some product other than a newspaper. As they finish, they explain it to another classmate who is finished.

2. Ask: Is there anything in our trash can that shouldn't be there? What should we do about it?

The Dead-End vs. Cycle Game

All students in the class can participate in this game. If possible, play in a space big enough for students to make a circle. The object of the game is to illustrate the problems with a Dead-End solution to waste (wasted trees and too many landfills), and to show how a Cycle and Recycle approach can solve these problems. Each student wears a sign around his/her neck showing which role he or she plays.

Forest

↓ "chirp-chirp"

Tree

↓

Logger

↓ (axe, chainsaw)

Logging Truck

↓ (truck sounds)

Paper Plant

↓ "chug-a, chug-a, bang-bang"

Recycling Plant

Printer

Recycling Truck

↓

Delivery Boy

"Extra, extra. Read all about it."

Recycling Bin

(thump)

Reader

↓

Trash Can

↓ (thump)

Garbage Truck

↓

Landfill

To the tune of "William Tell Overture"
"To the dump
To the dump
To the dump, dump, dump."

First, the children act out a Dead-End. Begin with all the Trees standing together in a forest, and all the Landfills sitting together. Send a rolled up newspaper through the steps in the illustration from Forest to Landfill. Each time a Logger cuts down a Tree, the Tree sits down. Each time the paper goes into the landfill, a Landfill stands up.

After running through this cycle a few times, ask the children to notice what is happening. (There are few or no Trees, and the Landfill is getting bigger).

Next, change the Dead-End to a Cycle, using recycling. Begin with all the Trees standing, and the Landfills sitting. A Logger cuts down one Tree, which goes on the Logging Truck to the Paper Plant, and so on through the cycle until it comes to the Reader. This time, the Reader throws the paper into the Recycling Bin instead of the Trash Can.

The Recycling Truck picks up the paper and takes it to the Recycling Plant, where it is made into recycled paper. The former Logging Truck, which is now a Recycling Truck (turn sign over) carries this recycled paper to the Printer, where it is made into a newspaper. This newspaper can keep making the rounds and being recycled. Ask the children how this is different from the Dead-End. (Trees are still standing, and the Landfill is not growing.) Former Loggers can be put to work as workers in the recycling plant (turn their signs over).

For use with "What Goes Around..."

landfill

landfill

landfill

tree

tree

tree

3.7

recycling plant (on back of paper plant)	recycling plant (on back of paper plant)	landfill
recycling worker (on back of logger)	tree	tree

logging truck (on back of recycling truck)	logger (on back of recycling worker)
printer	paper plant (on back of recycling plant)
delivery boy	paper plant

trash can
(on back of recycling bin)

recycling truck
(on back of garbage truck)

recycling truck
(on back of logging truck)

reader

garbage truck
(on back of recycling truck)

recycling bin
(on back of trash can)

For use with "What Goes ...und..."